## (19) World Intellectual Property Organization International Bureau



# 

### (43) International Publication Date 1 September 2005 (01.09.2005)

# (10) International Publication Number WO 2005/080288 A3

(51) International Patent Classification': C04B 28/02, 40/00

(21) International Application Number:

PCT/IB2005/000306

- (22) International Filing Date: 8 February 2005 (08.02.2005)
- (25) Filing Language:

Italian

(26) Publication Language:

English

(30) Priority Data: MI2004A000228 12 February 2004 (12.02.2004)

- (71) Applicant (for all designated States except US): ITAL-CEMENTI S.P.A. [IT/IT]; Via Camozzi, 124, I-24121 Bergamo (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): COSTA, Umberto [IT/IT]; Via Marzanica 15/A, I-24124 Bergamo (IT). CUCITORE, Roberto [IT/IT]; Via Lombardia 6, I-24124 Bergamo (IT).
- (74) Agent: GERLI, Paolo; Notarbartolo & Gervasi S.p.A., Corso di Porta Vittoria, 9, I-20122 Milano (IT).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### Declaration under Rule 4.17:

of inventorship (Rule 4.17(iv))

#### Published:

- with international search report
- (88) Date of publication of the international search report: 27 April 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: USE OF NEW FAST-SETTING MORTARS FOR PREPARING PRODUCTS BY MEANS OF POURING IN FOUNDRY EARTH MOULDS

(57) Abstract: Described herein is the use of new cementitious mortars with a high degree of fluidity and short consolidation times in the production of cementitious products by means of pouring in foundry moulds. The mortars used contain water, a fastsetting cement, fluidifiers and/or superfluidifiers, setting regulators, and aggregates having a specific granulometric distribution. The aggregates are made up of two fractions with different grain size such that the ratio between the characteristic grain diameters of the two fractions is comprised between 2.2 and 3.2. The new mortars thus obtained have values of fluidity 2-3 times higher than those of mortars produced with traditional aggregates. The mortars thus produced are particularly suitable for filling, in a homogeneous way and without any application of vibration, foundry earth moulds; solidification in the moulds takes place in a short time and leads to the formation of products, including ones of a complex shape, with precise outlines and having good mechanical characteristics.

